(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 29 April 2004 (29.04.2004)

(10) International Publication Number

(51) International Patent Classification⁷: G01N 27/64

H01J 49/00,

WO 2004/036617 A3

(21) International Application Number:

PCT/GB2003/004464

(22) International Filing Date: 14 October 2003 (14.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0223792.3

14 October 2002 (14.10.2002) GB

(71) Applicant and

(72) Inventor: GORBUNOV, Boris, Zachar [GB/GB]; 20 Kings Park, Canterbury, Kent CT1 1QH (GB).

(74) Agent: COHEN, Alan, Nicol; 2 Grove Place, Tatsfield, Nr Westterham, kent TN16 2BB (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

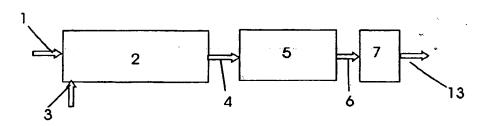
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 1 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ION COUNTER



(57) Abstract: Ions in a steady flow sample are counted by colliding the ions in a mixing chamber (2) with a numerical excess of uncharged aerosol particles, suitably glycerol, entrained in air, to transfer respective charges from the ions to charge individual aerosol particles and passing the gases through a separating chamber (5) subjected to an electric field to direct the charges aerosol particles to impinge upon an optical particle counter (7).